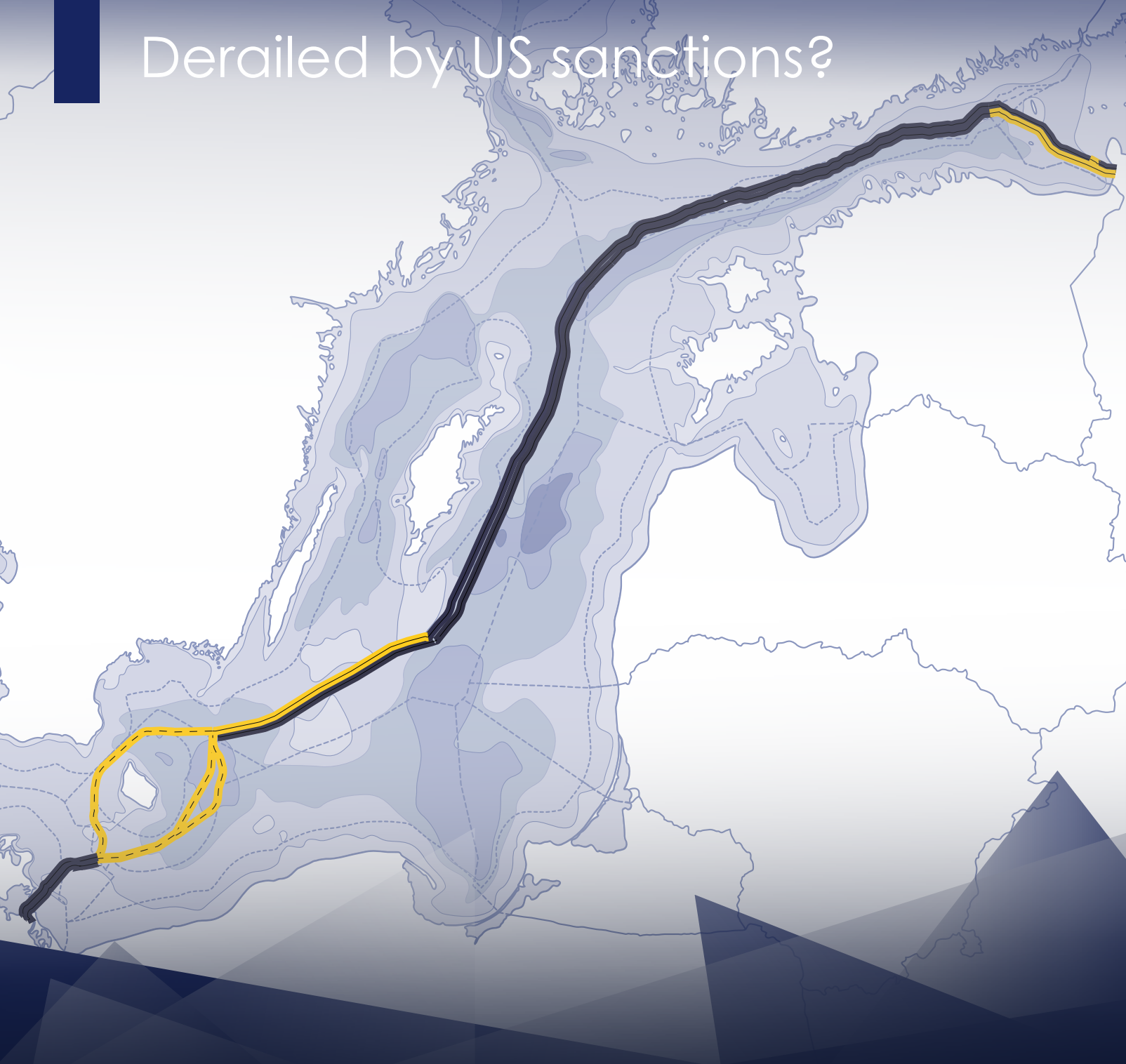


NORD STREAM 2

Derailed by US sanctions?



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US SANCTIONS AGAINST NORD STREAM 2: CURRENT DEVELOPMENTS

Since August 2017 the Countering America's Adversaries Through Sanctions Act, CAATSA has been in force in the USA, enabling the president to impose sanctions on companies that take part in Russian-led Nord Stream 2 project. Under said Act, US government can penalize virtually any entity that meaningfully engages in the development of gas export pipelines from Russia, i.e. any entity that makes a single investment equivalent to 1 million USD or a series of investments equivalent to 5 million USD over 12 months. The sanctions are, however, facultative in nature and the decision to impose them requires prior consultation with US allies. Consequently, the provisions of CAATSA regarding Nord Stream 2 have not yet been put to use.

Facing lack of political will to use the existing law against Nord Stream 2, the Congress is currently reviewing two additional bills which, unlike CAATSA, will not require sanctions to be consulted with American allies.

The more advanced and potentially more effective of the two is the Protecting Europe's Energy Security Act (PEESA). Its purpose is to introduce mandatory sanctions on foreign entities that would sell, lease or provide vessels laying pipelines in depths over 100 feet (around 30 m) to Nord Stream 2 or TurkStream projects (or to any successor project of those). The bill would authorize US president to apply the whole spectrum of asset-freezing sanctions against such entities based on the powers granted by the

International Emergency Economic Powers Act and to target corporate officers and shareholders of the identified companies personally. Furthermore, a separate, facultative set of sanctions could be applied against banks and other institutions providing underwriting services, insurance or reinsurance for the targeted pipe-laying vessels. The bill would also allow President to apply exemptions in accordance with the national security interest.

The initial draft of PEESA was further amended with provisions that define the conditions for revoking sanctions once they have been put in place.

Under said provisions, sanctions shall apply for no longer than 10 years since enactment of PEESA, but their earlier revocation would depend on Russia fulfilling certain conditions that currently seem unachievable. These conditions would include in particular:

- *unbundling* of the energy production and transmission, meaning that Russian state-owned companies would not control the transmission infrastructure;
- transparency of Russian natural gas market and effective regulatory oversight;
- ensuring that a project in question will not lead to reduction of current gas transit through Ukraine (or other third states) by more than 25%.

COUNTERING AMERICA'S ADVERSARIES THROUGH SANCTIONS ACT

(„CAATSA”, SIGNED 2017)

- sanctions on various entities engaged in Nord Stream 2;
- facultative sanctions depending on US president decision;
- requirement of consultation with allies of the USA.

PROTECTING EUROPE'S ENERGY SECURITY ACT

(“PEESA”, BEING PROCEEDED)

- sanctions on suppliers of pipeline-laying ships;
- mandatory sanctions without need for consultation with allies;
- exemptions can be provided by US President.

IMPOSING SANCTIONS: TIME IS AT A PREMIUM

At the end of July, the PEESA bill was approved by the Senate Committee on Foreign Relations with 20:2 majority, which means that the draft has gained bipartisan support. The bill still requires approval by the plenary vote in the Senate and the House of Representatives, as well as presidential signature in order to enter into force.

If, as expected, Protecting Europe's Energy Security Act will not meet with significant opposition within the Congress, the Act could enter into force as early as October.

Adopting the Act as soon as possible is crucial due to continuous progress of Nord Stream 2 project. Only prompt implementation of sanctions now, when several hundred kilometers of pipeline still await construction, may prevent the project's completion.

Theoretically, upon passing PEESA, the actual deployment of sanctions would still require some time, as the Secretary of State (in consultation with the Secretary of Treasury) will have 60 days to draft a report listing all persons and entities involved in supplying ships to NS2. However, a company that participates in pipe-laying would still be listed for sanctions since the date of PEESA's entry into force – thus, a decision to withdraw from the project in order to avoid sanctions should most likely be made on that date at the very latest. Furthermore, it can be

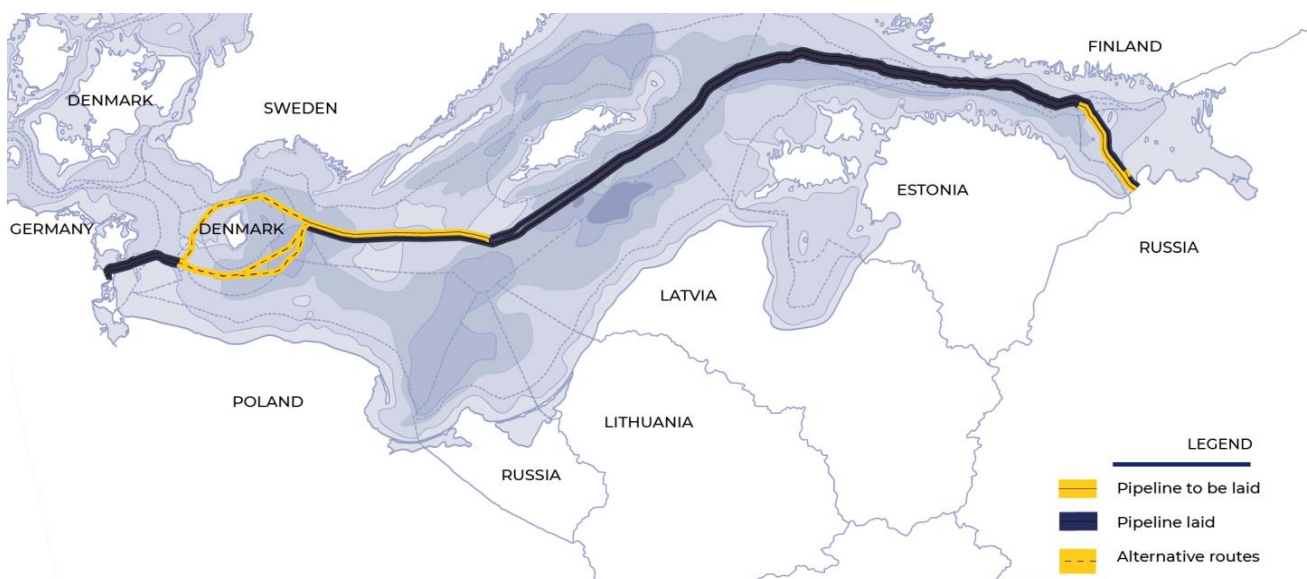
assumed that US President might decide against granting any exemptions from PEESA that would be favourable for the Russians, as in order to do so, he would have to first present the Congress with a convincing explanation based on national security interest. Given the possible political repercussions in the context of previous accusations of ties with Russia, Donald Trump's administration may not wish to risk such a move, especially before 2020 election.

Presently, construction of NS2 pipeline is still being continued in the Swedish and Russian waters. At the same time Nord Stream 2 AG is yet unable to commence work on the Danish section.

Denmark remains the only state that has not yet issued a construction permit for NS2, but this might change as soon as mid-Autumn 2019.

Based on project documentation of Nord Stream 2, a timeframe for the pipeline construction in Denmark can be foreseen. Completion of both pipeline strings should likely take at least 4-5 months after obtaining the permit from the Danish Energy Agency. It in turn means that US sanctions should enter into force before the end of 2019 in order to have an actual impact on the project.

NORD STREAM 2 CONSTRUCTION PROGRESS*



*As of 23th of August 2019

TARGETING NORD STREAM 2 CONTRACTORS, NOT PROMOTERS

GLOBAL SUBSEA PIPE LAYING COMPANIES PRESENCE IN THE UNITED STATES

	ALLSEAS	SAIPEM	TECHNIPFMC	SUBSEA 7	SAPURA ENERGY	MCDERMOTT
OFFICE IN USA	✓	✓	✓	✓	✓	✓

From the perspective of those opposing Nord Stream 2, a notable advantage of PEESA in comparison to its predecessor CAATSA is that the PEESA sanctions would target only the suppliers of highly specialized pipe-laying ships. Thus, European energy companies that provide co-financing to Nord Stream 2 (namely Engie, OMV, Shell, Uniper, Wintershall Dea) as well as the project's numerous subcontractors should not be directly affected. This should minimize the economic fallout from the sanctions affecting the economies of America's allies. Still, European companies financing NS2 might face some consequences, such as delays in the repayment of credit by NS2 AG or even partial loss of the invested funds. Such consequences might be particularly acute for two German companies – Uniper and Wintershall.

Narrowing down the scope of sanctions to only the providers of ships engaged in pipe-laying in Baltic should not, however, limit their effectiveness.

The number of companies with sufficient technology and know-how for such complex operations as construction of the world's longest offshore gas pipeline is extremely limited. Currently, most of the NS2 construction is being handled by the Swiss-based Allseas.

It should be pointed out that the completion of just the Danish section of NS2 project will require laying

290-350 kilometers of pipeline (depending on the selected route) within various depths ranging from 20 to 100 meters. Accompanying work such as rock placement and additional challenges specific to the proposed routes should also be taken into account. For example, according to the north-western variant, the pipeline would have to cross the main Baltic transport channel and zigzag between protected reefs and undorsa sandbanks with almost surgical precision, while the south-eastern route would also require extreme caution due to the threat of unexploded ordnance and chemical weapons from WWII.

Specific nature of NS2 construction (technical obstacles, time pressure) and narrow pool of potential contractors could render the sanctions against ship suppliers decisively effective.

All of the 6 global companies undertaking EPIC contracts for offshore pipeline construction (Allseas, Saipem, TechnipFMC, Subsea 7, Sapura Energy, McDermott) maintain offices in the USA and remain more or less tied to the US economy. Considering that the sanctions could remain in force for as long as 10 years, it seems unlikely that any of these companies would be ready to take the risk and work on Nord Stream 2. Effectiveness of post-Crimea sanctions in halting the Russian shelf oil&gas projects seems to further validate this prognosis.

IMPOSING SANCTIONS ON ALLSEAS: IMPLICATIONS FOR NORD STREAM 2

PEESA's entry into force before the completion of Nord Stream 2 and possible withdrawal of Allseas would have a substantial impact on the project. In such case the construction work would most likely have to be halted and the incomplete sections of the pipeline would have to be deposited on the seabed. As a result, barring possible continuation of the work by Russian MRTS (Mezhregiontruboprovodstroy) in the Russian shallow waters, construction of Nord Stream 2 would effectively be stopped.

So far the Russian side displayed a very proactive approach towards any potential threats of NS2's delay. A good example of this is their very active stance in the Danish permit procedure, aimed at minimizing the impact of Danish obstruction. Russian investor prepared alternative route proposals in advance, even though it was not certain at that point that such alternatives would be required.

It should therefore be assumed that the Russians might have been making preparations for some time in anticipation of possible exclusion of Western companies from NS2 construction.

It would seem that the Russian plan B might involve using the capacity of national companies in extensive cooperation with foreign subsea experts. Currently, Russian companies capable of deploying pipe-laying ships are MRTS and Gazprom Flot.

Gazprom (the sole shareholder of Nord Stream 2 AG) may possibly want to deploy a pipe-laying vessel Akademik Cherskiy (previously known as JASCON 18), bought by the Russians already in 2015.

What is important from the technical and engineering perspective is that Akademik Cherskiy – unlike the other pipe-laying ships used by MRTS (Fortuna, Defender) – is fitted with a dynamic positioning system. However, Akademik Cherskiy has not yet been used in any subsea operation. The ship is currently undergoing tests in the Far-Eastern port of Nakhodka with the purpose of future use in construction work in the Sea of Okhotsk under the Sakhalin-3 project (Yuzhno-Kirinskoye field, currently on the US sanctions list).

That is worth to note that Akademik Cherskiy has been modernized and additionally equipped by the Russians since last few years. The official purpose of that is to adjust it to the challenges laying ahead of working on Yuzhno-Kirinskoye field (currently scheduled by Gazprom to be exploited at 2023). Still, it should not be ignored, that all these upgrades might be sufficient to enable Akademik Cherskiy's participation in the Nord Stream 2 project. It has to be, however, further assessed how much work within the ship still has to be done to prepare it to possible work on the NS2 instead of Sakhalin-3.

POSSIBLY RELEVANT RUSSIAN VESSELS IN CASE OF NORD STREAM 2 BUILDING

	DYNAMIC POSITIONING	PIPE-LAYING EQUIPMENT	NEED FOR UPGRADE
FORTUNA (MRTS)	no DP system (12-point anchor barge)	S-Lay system (diameter 6"-60")	upgrade required
DEFENDER (MRTS)	no DP system (10-point anchor barge)	S-Lay system (diameter 6"-60")	upgrade required
AKADEMIK CHERSKIY (GAZPROM FLOT)	DP3 class vessel	S-Lay system (diameter 4"-60")	modernization undergoing

MAIN CONCLUSIONS

Shortening time horizon for American sanctions.

Considering the prognosed timeframe for NS2 construction, American sanctions would have to enter into force in October-November in order to meaningfully affect the project. Blocking the investment will no longer be realistic if at least one of the pipeline's strings is completed including sections within Danish, Swedish and Russian EEZ. It should be assumed that Nord Stream 2 AG could accomplish this goal by the 2nd quarter of 2020, although the project's proponents claim that it should be possible even before the end of 2019.

Currently, Denmark remains the only state which has not yet issued a construction permit for NS2. This, however, could change during the 4th quarter of 2019. Based on the NS2 project documentation (Environmental Impact Assessment) it is possible to prognose the timeframe for the pipeline construction in the Danish waters. Completion of both pipelines in that area should take at least 4-5 months after obtaining the permit from the Danish Energy Agency, with the construction itself lasting 4-5 weeks for each pipeline's string. Construction of the 200-km long section of the 'A' string in the Swedish EEZ will commence on 1st September 2019 – thus, if sanctions enter into force at the beginning of October 2019, they should affect the Swedish section as well.

Allseas leaving the construction site?

Implementing the US sanctions before the completion of one or both Nord Stream 2 strings would likely force Allseas to halt construction work which might lead to the NS2 being postponed due to NS2 AG lacking access to the services of global subsea companies (Allseas or others). Primary sanctions (asset freezing and inadmissibility to United States) against entities and persons supplying pipe-laying ships to Nord Stream 2 will be introduced via executive acts of US President and the Secretaries of State and Homeland Security as mandatory sanctions (i.e. those officials will not have discretion in that matter). In addition, the bill includes a catalogue of sanctions that the President could apply discretionally, as well as a separate category of optional sanctions against entities that would provide underwriting or insurance services to the pipe-laying ships.

Such structure of sanctions would allow for applying twofold pressure on the ship providers and their insurers. Thus, even if a particular ship provider would defy the risk of sanctions and provide a ship to NS2 AG, that ship could still be effectively rendered inoperational in the absence of a willing insurer.

Bringing forward the completion of a single pipeline?

Threatened by the possibility of US sanctions and by the EU's updated gas directive (EU 2019/692), NS2 AG will likely concentrate on a swift completion of at least one of the NS2

strings. If the implementation of American sanctions is delayed and the construction permit is promptly issued by the Danish Energy Agency, NS2 AG could try to finish construction of at least one string – if not both. However, contracting any additional pipe-laying vessels from Allseas prior to the implementation of sanctions could still prove to be a problem, at the same time forcing NS2 AG to modify previous technical assumptions (like the number of above-water tie-ins).

Potential deployment of Russian pipe-laying ships would require the Russians to obtain technology, relevant know-how and possibly to modernize their fleet (continuation of undergoing modernization of Akademik Cherskiy and thorough upgrade of MRTS ships Fortuna and Defender) resulting in a major postponement of Nord Stream 2. If, however, no such upgrade is needed in case of Akademik Cherskiy due to the Russian modernization efforts in the last few years, then the initial delay of the project could be limited to at least few months required for ship deployment and crew mobilization. Still, in such a scenario there are other factors that could slow down the work. Firstly, Russians would be able to commit only a single vessel to the task, while Allseas is providing two ships working simultaneously in two locations. What is more, bringing Akademik Cherskiy to Europe should also cause another major rescheduling of the Yuzhno-Kirinskoye project, which is also essential for Gazprom - especially for its ability to supply the Chinese market.

MRTS is currently being contracted for NS2 construction, mainly within Russian territorial waters, but its primary purpose there seems to be capacity building. Additional obstacle for use of the Russian ships is the possibility of US sanctions targeting the insurers and underwriters. Although insurance could be provided by the Russian companies or institutions, additional reinsurance will also be needed, which might require participation of either a foreign entity or the Russian state. Still, it remains uncertain if sanctions against the insurers would actually be implemented, as this issue would remain at President Donald Trump's discretion.

Due to the limited capacity of Russian companies for subsea work, the Russian side might try to compensate by hiring foreign employees. Therefore, in order to further affect Nord Stream 2 project and prevent circumvention of PEESA sanctions by the Russian investor, USA might decide to introduce additional sanctions against individual engineers, experts and crewmen.

Possibilities for the Russians to complete construction on their own.

Possible need to further extend the sanctions.